



E1621
JACC March 27, 2012
Volume 59, Issue 13

Prevention

LACK OF ASSOCIATION BETWEEN POLYMORPHISMS IN THE SLC01B1 GENE AND CLINICAL MYALGIA FOLLOWING ROSUVASTATIN THERAPY

ACC Oral Contributions

McCormick Place South, S100c

Sunday, March 25, 2012, 8:38 a.m.-8:51 a.m.

Session Title: Prevention: Focus on Lipids

Abstract Category: 9. Prevention: Clinical

Presentation Number: 911-6

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Background: Carriers of rare alleles rs4363657 C and rs4149056 C in the SLC01B1 gene have increased incidence of myopathic complaints when taking simvastatin. Whether rosuvastatin has a similar effect is uncertain.

Methods: In the recently completed JUPITER trial, men and women without prior cardiovascular disease or diabetes who had baseline LDL-C <130mg/dL and high sensitivity C-reactive protein (hsCRP) \geq 2mg/L were randomly allocated to rosuvastatin 20 mg daily or to placebo and followed for first major cardiovascular events, as well as for adverse effects. We evaluated the effect of polymorphisms rs4363657 and rs4149056 in the SLC01B1 gene that encodes the organic anion-transporting polypeptide OATP1B1, a regulator of hepatic uptake of statin, on clinically reported myalgia in this primary prevention trial.

Results: Overall, among 4404 Caucasian trial participants randomly allocated to rosuvastatin, clinically reported myalgia occurred with a rate of 4.1 events per 100 person-years as compared to a rate of 3.7 events per 100 person-years among 4378 trial participants allocated to placebo (HR 1.13, 95% CI 0.98-1.30). Among those allocated to active rosuvastatin, there were no differences in rate of myalgia among carriers of the rs4363657 C allele (HR 0.95, 95% CI 0.79-1.14 per allele) or the rs4149056 C allele (HR 0.95, 95% CI 0.79-1.15 per allele) when compared to non-carriers. Similar null data were observed when the definition of myalgia was broadened to include any complaint of muscle weakness, stiffness, or pain.

Conclusions: In contrast to data for simvastatin, there appears to be no increased risk of myalgia among users of rosuvastatin who carry the rs4363657 C or the rs4149056 C allele in the SLC01B1 gene.